

# 9th Class 2021

Math (Science)	Group-II	Paper-I
Time: 20 Minutes	(Objective Type)	Max Marks: 15

**Note:** Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1- In  $\sqrt[3]{35}$ , the radicand is:

- (a) 3 (b)  $\frac{1}{3}$   
(c) 35 ✓ (d) None of these

2- H.C.F. of  $a^2 - b^2$  and  $a^3 - b^3$  is \_\_\_\_\_.

- (a)  $a - b$  ✓ (b)  $a + b$   
(c)  $a^2 + ab + b^2$  (d)  $a^2 - ab + b^2$

3- The right bisectors of the three sides of a triangle are \_\_\_\_\_.

- (a) Congruent (b) Collinear  
(c) Concurrent ✓ (d) Parallel

4- Point (2, -3) lies in quadrant:

- (a) I (b) II  
(c) III (d) IV ✓

5- The product of  $\begin{bmatrix} x & y \end{bmatrix} \begin{bmatrix} 2 \\ -1 \end{bmatrix}$  is:

- (a)  $[2x + y]$  (b)  $[x - 2y]$   
(c)  $[2x - y]$  ✓ (d)  $[x + 2y]$

6- If  $x$  is no larger than 10, then \_\_\_\_\_.

- (a)  $x \geq 8$  (b)  $x \leq 10$  ✓  
(c)  $x < 10$  (d)  $x > 0$

7. A point equidistant from the end points of a line segment is on its \_\_\_\_.
- (a) Bisector
  - (b) Right bisector ✓
  - (c) Perpendicular
  - (d) Median
8. Write  $4^{2/3}$  with radical sign:
- (a)  $\sqrt[3]{4^2}$  ✓
  - (b)  $\sqrt{4^3}$
  - (c)  $-2\sqrt{4^3}$
  - (d)  $\sqrt{4^6}$
9.  $\log e =$  \_\_\_\_, where ( $e \approx 2.718$ ).
- (a) 0
  - (b) 0.4343
  - (c)  $\infty$
  - (d) 1 ✓
10. Adj of  $\begin{bmatrix} 1 & 2 \\ 0 & -1 \end{bmatrix}$  is:
- (a)  $\begin{bmatrix} -1 & -2 \\ 0 & 1 \end{bmatrix}$  ✓
  - (b)  $\begin{bmatrix} 1 & -2 \\ 0 & -1 \end{bmatrix}$
  - (c)  $\begin{bmatrix} -1 & 2 \\ 0 & -1 \end{bmatrix}$
  - (d)  $\begin{bmatrix} -1 & 0 \\ 2 & 1 \end{bmatrix}$
11. H.C.F. of  $x^2 - 5x + 6$  and  $x^2 - x - 6$  is:
- (a)  $x - 3$  ✓
  - (b)  $x + 2$
  - (c)  $x^2 - 4$
  - (d)  $x - 2$
12. Mid-point of the points (2, 2) and (0, 0) is:
- (a) (1, 1) ✓
  - (b) (1, 0)
  - (c) (0, 1)
  - (d) (-1, -1)
13.  $a^3 + b^3 =$  \_\_\_\_.
- (a)  $(a - b)(a^2 + ab + b^2)$
  - (b)  $(a + b)(a^2 - ab + b^2)$  ✓
  - (c)  $(a - b)(a^2 - ab + b^2)$
  - (d)  $(a - b)(a^2 + ab - b^2)$



14- The value of  $\log \left( \frac{p}{q} \right)$  is :

(a)  $\log p - \log q$  ✓

(b)  $\frac{\log p}{\log q}$

(c)  $\log p + \log q$

(d)  $\log q - \log p$

15- Factors of  $a^4 - 4b^4$  are \_\_\_\_\_.

(a)  $(a - b), (a + b), (a^2 + 4b^2)$

(b)  $(a^2 - 2b^2), (a^2 + 2b^2)$  ✓

(c)  $(a - b), (a + b), (a^2 - 4b^2)$

(d)  $(a - 2b), (a^2 + 2b^2)$

